

Homework 7 (Updated)

Based on your HW6 SpringBoot project, achieve below functions:

1. Create another Teacher Entity(id, name, address, Set<Student>)
2. Create related TeacherService, TeacherRepository, Teacher Controller to support below APIs:
 - a. Create teacher API
 - b. Get teacher by id API
3. In your Student entity, add another attribute teacherId
4. Add a SignupService class, and a SignupController class to support below API
 - a. Signup a student with a teacher to build a connection – signupStudent API
 - b. Update a student with another teacher connection (need to cleanup previous connection) – updateSignup API
 - c. Delete a student and teacher connection if existed – deleteSignup API
5. For each class, using proper annotation and using Dependency Injection to access shared resources.

To verify the functionality, we will check in below steps:

- Create a Student Amy by createStudent API, with id 001. (Point 5)

- Create a Teacher Anna by createTeacher API, with id 001. (Point 5)
- Create a Teacher Andy by createTeacher API, with id 002. (Point 5)
- Signup Amy with teacher Anna, by signupStudent API. (Point 5)
- Get Amy to check the teacherId should be 001 in response, by getStudentById API. (Point 10)
- Get Anna to check the list of students, by getTeacherById API, and Amy should in the list. (Point 10)
- Update Amy's teacher to Andy by updateSignup API (Point 5)
- Get Amy to check the teacherId should be 002 in response, by getStudentById API (Point 10)
- Get Anna to check the list of students, by getTeacherById API, and Amy should NOT in the list. (Point 10)
- Get Andy to check the list of students, by getTeacherById API, and Amy should in the list. (Point 5)
- Remove Amy – Andy relation by calling deleteSignup API. (Point 5)
- Get Amy to check the teacherId should be **EMPTY or NULL** in response, by getStudentById API. (Point 5)
- Get Andy to check the list of students, by getTeacherById API, and the student set should be **EMPTY or NULL**. (Point 5)
- Proper annotation or equivalent bean to configure it. (Point 10)
- Clean code style, and proper comment on it. (Point 5)